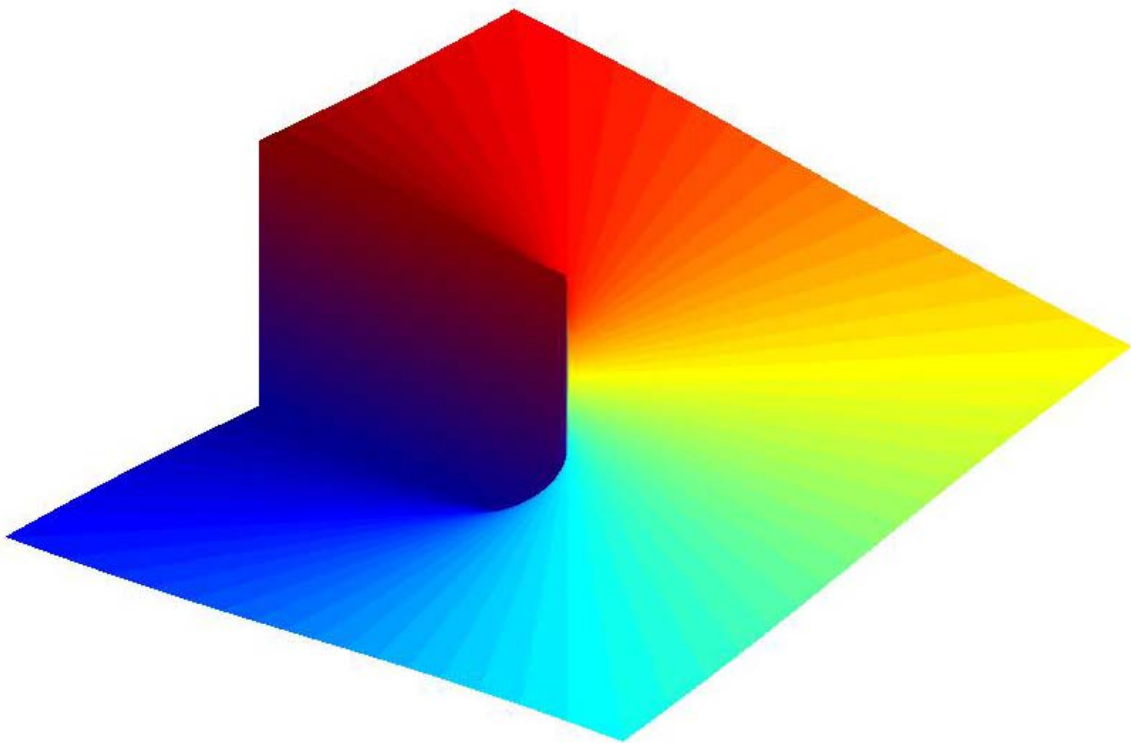


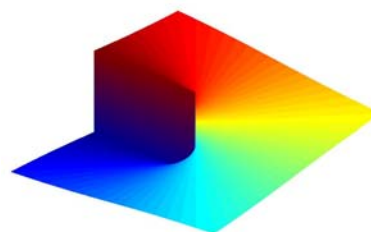


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Vortex Phase Plates Standard Quote Catalog



RPC Photonics, Inc.
Vortex Phase Plate
Standard Quote Catalog



Quote #: **RPC-VPP-2011**

Description

Vortex phase plate standard product line

Part number	Substrate Dimensions	Material	Charge	Wavelength Map	Unit Price - Academic	Unit Price - Commercial	Standard Lead Time
VPP-1a	100mm diameter 6mm thickness	Polymer on glass	1	See p. 3 below	\$ 1200	\$ 1500	5-6 wks ARO
VPP -1b	100mm diameter 6mm thickness	Polymer on glass	1	See p. 4 below	\$ 1200	\$ 1500	5-6 wks ARO
VPP-1c	100mm diameter 6mm thickness	Polymer on glass	1	See p. 5 below	\$ 1200	\$ 1500	5-6 wks ARO
VPP -2	100mm diameter 6mm thickness	Polymer on glass	2	See p. 6 below	\$ 1200	\$ 1500	5-6 wks ARO
VPP -m633	100mm diameter 6mm thickness	Polymer on glass	See p. 7 below	633nm	\$ 1200	\$ 1500	5-6 wks ARO
VPP -m1064	100mm diameter 6mm thickness	Polymer on glass	See p. 8 below	1064nm	\$ 1200	\$ 1500	5-6 wks ARO

Shipping and Handling

	Domestic Address	International Address (Fedex or UPS)	International Address (DHL)
Shipping Charges	TBD	\$ 75.00 USD	Customer DHL Import Account # required
Handling Fee	\$ 25.00	\$ 75.00 USD	\$ 100.00 USD

Shipping Note: For companies choosing to use a Company account for international shipments, our preferred method of shipping is Federal Express or UPS. Handling fees will still apply.

Notes:

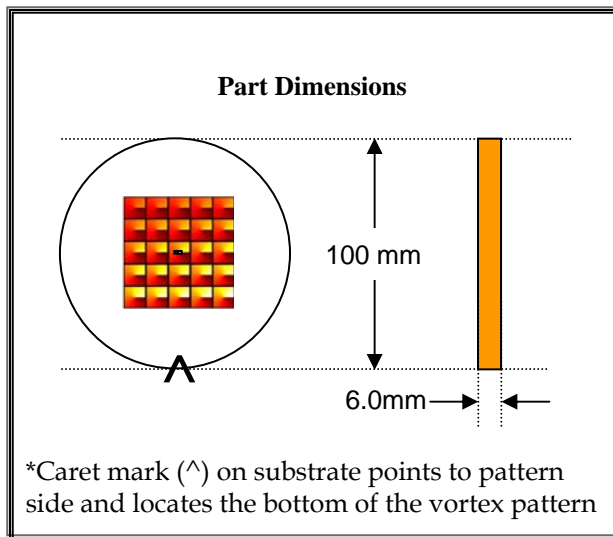
- Any RPC Photonics products are sold for use as products or samples and are not to be duplicated or replicated without written consent from RPC Photonics, Inc.
- Payment terms are NET 30 days from invoice date. Electronic Fund Transfer. Visa and MasterCard accepted
- Payment of Freight, Shipping, Handling, Insurance costs, Duties Taxes and fees is the responsibility of the purchaser.
- Lead-time based on current workload and subject to change depending on actual workload at time of order.
- Pricing subject to change without notice

Please refer to quote number when placing a Purchase Order.

Vortex Phase Plate

VPP-1a

Properties	
Master	u6243E
Pattern dimension	~50 x 50
Vortex aperture	10 x 10mm
Charge	1
Material	Polymer replicated on glass substrate
Index of refraction	1.56
Transmission spectrum	350-2000nm
Temperature range	-150°C to 120°C

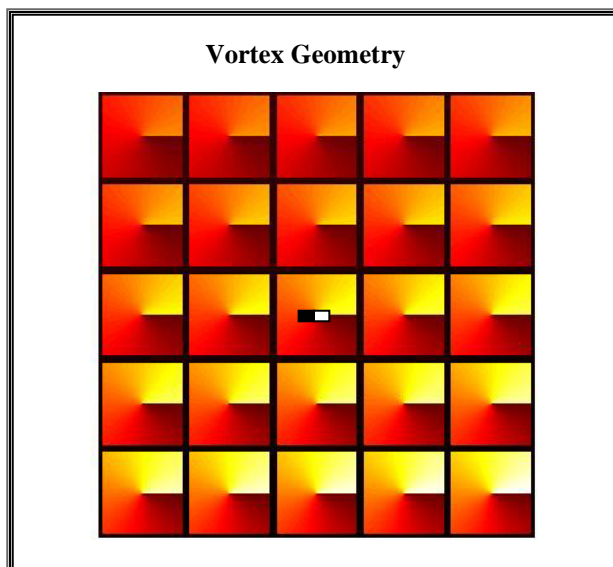


Wavelength Map for 2π Phase Depth

527.0	512.5	487.3	466.2	443.9
629.2	620.4	596.5	576.7	560.8
735.8	727.7		688.9	678.8
849.9	844.2	826.6	807.3	796.3
990.8	999.7	983.6	959.8	939.4

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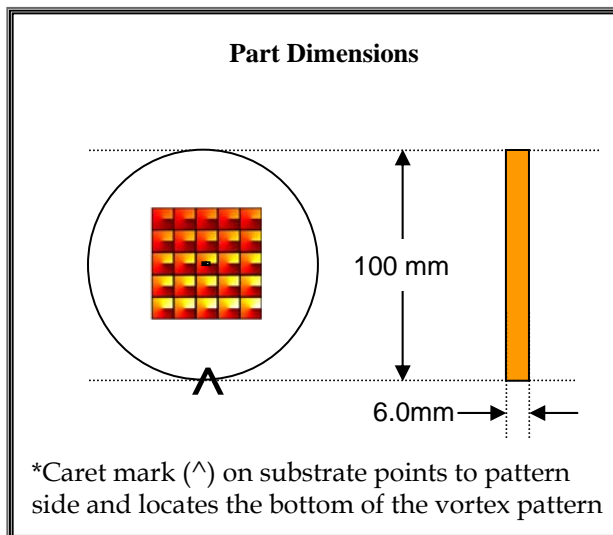
*Pattern side up



Vortex Phase Plate

VPP-1b

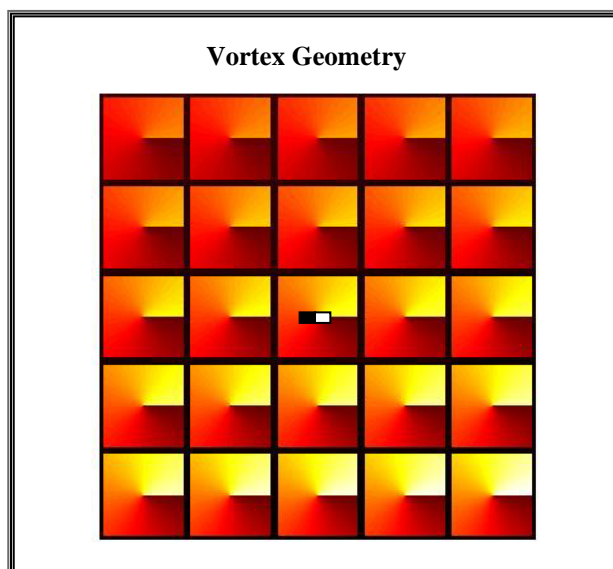
Properties	
Master	u9182E
Pattern dimension	~50 x 50
Vortex aperture	10 x 10mm
Charge	1
Material	Polymer replicated on glass substrate
Transmission spectrum	350-2000nm
Temperature range	-150°C to 120°C
Defects	None



Wavelength Map for 2π Phase Depth

339	365	372	375	398
407	418	432	463	542
548	539		552	582
683	671	708	735	794
858	953	969	1193	1450

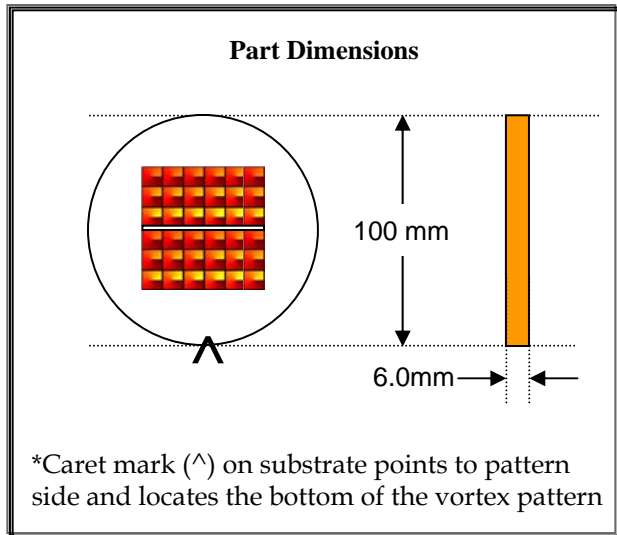
***Pattern side up** ^



Vortex Phase Plate

VPP-1c

Properties	
Master	u9271E
Pattern dimension	~50 x 50
Vortex aperture	10 x 10mm
Charge	1
Material	Polymer replicated on glass substrate
Transmission spectrum	350-2000nm
Temperature range	-150°C to 120°C
Defects	None

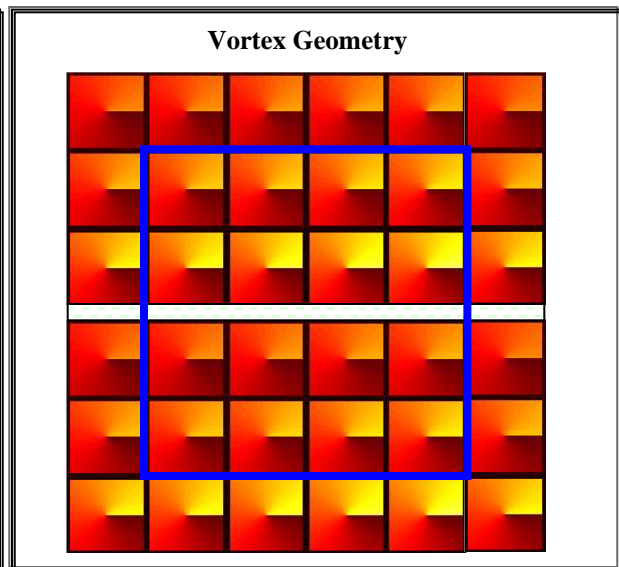


Wavelength Map for 2π Phase Depth

1515	1471	1504	1515	1471	1455
1531	980	854	606	1520	1466
1563	490	395	388	474	1542
1542	534	455	411	607	1536
1520	1081	779	721	885	1515
1509	1477	1498	1515	1520	1525

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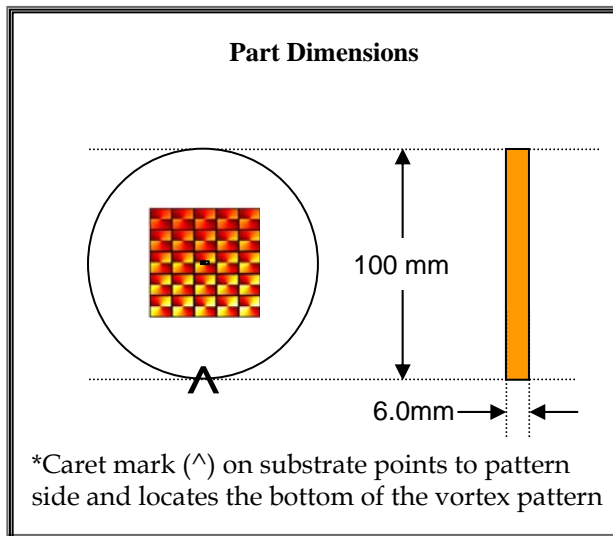
*Pattern side up
Blue boundary indicates clear aperture



Vortex Phase Plate

VPP-2

Properties	
Master	u7155E
Pattern dimension	~50 x 50
Vortex aperture	10 x 10mm
Charge	2
Material	Polymer replicated on glass substrate
Index of refraction	1.56
Transmission spectrum	350-2000nm
Temperature range	-150°C to 120°C
Defects	None

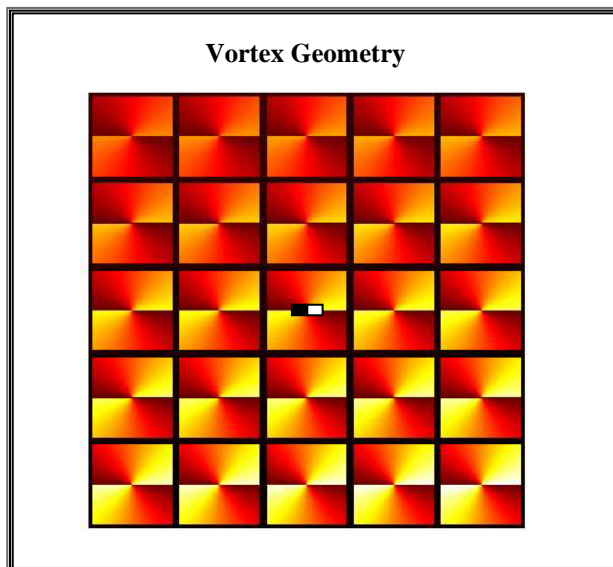


Design wavelength, nm (master u7155E)

465.2	436.1	419.1	394.0	370.1
598.0	567.8	544.4	521.0	493.6
748.5	708.9		661.2	638.2
897.0	851.9	828.8	806.7	779.8
1026.8	1004.1	978.1	954.3	925.7

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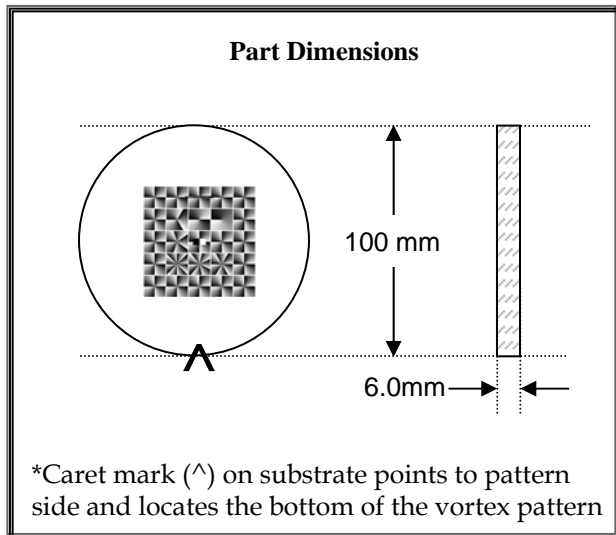
***Pattern side up**



Vortex Phase Plate

VPP-m633

Properties	
Master	u9317E
Pattern dimension	~50 x 50
Vortex aperture	10 x 10mm
Charge	Various
Wavelength	633 nm
Material	Polymer replicated on glass substrate
Transmission spectrum	350-2000nm
Temperature range	-150°C to 120°C
Defects	None

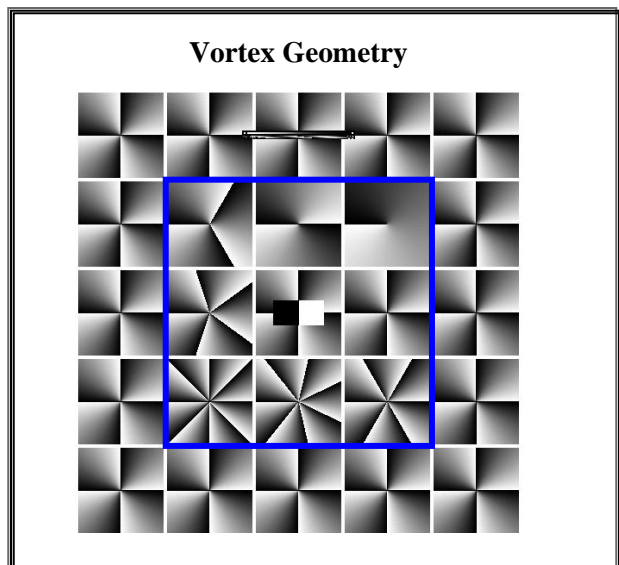


Charge Map

4	4	4	4	4
4	3	2	1	4
4	5		4	4
4	8	7	6	4
4	4	4	4	4

^

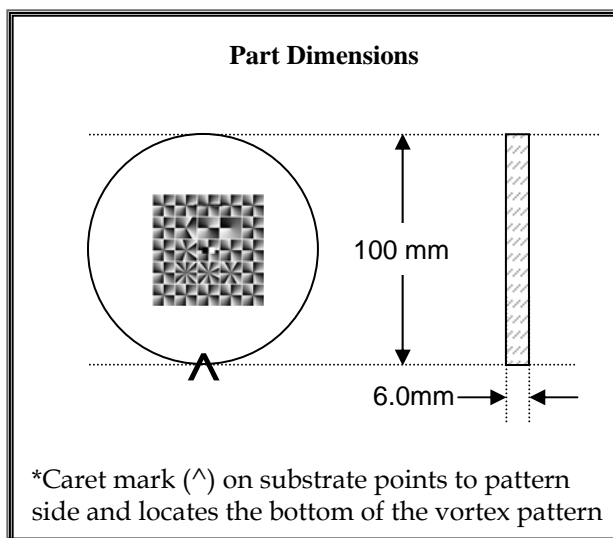
*Pattern side up
Blue boundary indicates clear aperture



Vortex Phase Plate

VPP-m1064

Properties	
Master	u9311E
Pattern dimension	~50 x 50
Vortex aperture	10 x 10mm
Charge	Various
Wavelength	1064 nm
Material	Polymer replicated on glass substrate
Transmission spectrum	350-2000nm
Temperature range	-150°C to 120°C
Defects	None

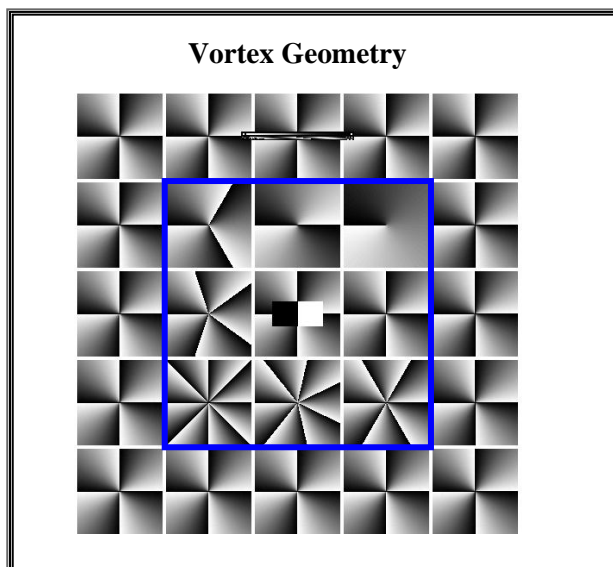


Charge Map

4	4	4	4	4
4	3	2	1	4
4	5		4	4
4	8	7	6	4
4	4	4	4	4

^

*Pattern side up
Blue boundary indicates clear aperture





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TERMS AND CONDITIONS

- **GENERAL.** All orders are subject to approval and acceptance by Seller. Seller shall not be liable to Buyer or any other party by reason of its failure to accept any order. Seller accepts order and sells items only in accordance with the terms and conditions contained herein, unless specifically agreed to the contrary in writing by a duly authorized officer of Seller. Notwithstanding any contrary provisions that Buyer may propose, Seller's acceptance of any order is conditional upon Buyer's assent to the terms and conditions contained herein; acceptance by Buyer of items delivered by Seller shall constitute Buyer's assent.
- **PRICES AND CHARGES.** The prices for all items (materials or services) to be furnished by Seller under any order are in United States dollars, and include provisions for packaging in accordance with standard commercial practices. Buyer shall be billed for items at prices in effect on the date of Seller's acceptance of Buyer's order for such items. Seller shall not be responsible for and Buyer shall pay all freight, transportation, insurance, shipping, storage, handling, demurrage or similar charges; provided, however, that Seller may at Seller's option, pay any or all such charges on behalf of Buyer and include such amounts in invoices to Buyer. Buyer-requested order changes require Seller's prior written consent. Seller reserves the right to change quoted process in the case of any functional specification changes, incremental changes in write times, or fluctuation in raw material costs to the Seller.
- **TERMS OF PAYMENT.** Unless progress payments as determined by Seller are required or Seller decides that Buyer's financial condition makes C.O.D. payments or advance payment necessary, **payment shall be made in full thirty (30) days from invoice date** (which will not be prior to shipment date). A payment by check from a non-US bank may have additional fees charged when it is deposited in a US bank. If that should occur, these fees will be added to your account. Overdue payments shall carry 18% per annum interest charges, or the legal maximum rate, whichever is lower. Buyer shall pay Seller's collection or litigation expenses, including reasonable attorney fees.
- **DELIVERY.** Delivery of all items shall be made F.O.B., Seller's designated domestic point of shipment. Title and risk of loss or damage shall, in all cases, pass to Buyer upon Seller's delivery to a common carrier or other delivery agency for shipment to Buyer. It shall be the responsibility of Buyer to file claims with the carrier for any loss or damage occasioned to goods while in transit. Seller shall use reasonable efforts to satisfy delivery dates requested by Buyer but shall have no obligation to satisfy such dates unless obligation is agreed to in writing signed by a duly authorized officer of Seller. Notice of nonconformity shall be given within thirty (30) days after receipt of the items involved.
- **WARRANTY AND LIMITATION OF LIABILITY. Standard Items:** Seller warrants that items sold to Buyer will conform to Seller's specifications, and will be free from defects caused by faulty material or poor workmanship. **Except as expressly set forth in the immediately preceding sentence, seller has not made and does not hereby make any representations or warranty, express or implied, with respect to the merchantability, performance, suitability or fitness of the items for the buyer's use or the buyer's customer's use.** Seller's liability under this warranty is limited to the obligation to repair or replace, without charge, at Seller's sole option, or refund the purchase price for any items, which are returned to Seller with all transportation charges prepaid, and which are found by Seller within thirty (30) days after delivery to Buyer, to be defective under the terms of this warranty. This warranty does not apply to any damage resulting from accident, misuse, or abuse; furthermore, this warranty is void in the event any unauthorized person alters or repairs the item. The warranty stated herein is in lieu of all other obligations for liabilities on the part of the Seller, and Seller neither assumes nor authorizes any other person to assume for it any other liability. Buyer expressly waives any right, claim or cause of action that might otherwise arise out of the purchase and use of Seller's materials and service. In no event shall Seller be liable for special or consequential damages of any nature with respect to any material sold or delivered, or any service rendered (including, without limitation, any loss or damage resulting from defects in the materials or services). **Custom Design and Development:** RPC cannot and does not guarantee that its design and development efforts will be successful in whole or in part. To the extent that RPC has used commercially reasonable efforts to render the services required hereunder in a prudent and skillful manner, the inability of RPC to develop a custom article will not constitute a breach by RPC of any representation, warranty, covenant or other obligation.
- **NOTICE OF CLAIM.** Immediately upon receipt, Buyer shall inspect items for any defects. All claims or defects discoverable upon inspection must be made in writing within fifteen (15) days after Buyer learns of the facts upon which the claim is based, but in no event later than thirty (30) days after Buyer's receipt of goods.
- **FORCE MAJEURE.** Seller shall not be liable for any loss, cost, expense or damage if the fulfillment by Seller of any order or any other obligation to buyer is delayed or prevented due to any cause beyond Seller's reasonable control including, but not limited to, compliance with any government law or regulation, acts of God, acts of civil or military authority, judicial action, priorities, labor disputes, failure or delays in transportation, embargoes, wars, riots, production or engineering delays, or inability of Seller or its vendors to secure adequate materials, manufacturing facilities or labor. In the event of any delay due to such causes or other difficulties, whether or not similar in nature to any of these enumerated, the delivery dates shall be extended for a period equal to the extent of the delay so incurred.
- **TAXES.** Prices quoted are exclusive of any sales, use, excise, *ad valorem* or other like taxes, and (on items sold outside the United States) customs, duties, licenses and permits, applicable to the sale, use or delivery of materials or services. In the event that any such tax or duty is payable, the amount thereof may be added by Seller to the price, and in all cases be paid by Buyer.
- **PROPERTY RIGHTS.** Seller retains ownership of its models, patterns, dies, molds, jigs, fixtures, tools, software and hardware made for furnishing any items to Buyer and retains ownership of its proprietary data (including, without limitation, design engineering, software programs and technical information – whether or not patentable – and trade secret information, such as secrets contained in manufacturing methods or processes, treatment and chemical compositions, and plant layout and tooling). Any such proprietary data obtained by Buyer shall not be used by Buyer, nor shall such proprietary data be disclosed to Buyer to others unless, prior to Buyer's disclosure, such data was already known to the general public other than as a result of any violation by Buyer of any provision hereof.
- **DEFAULT.** Seller shall have the right to stop work at any time and to withhold deliveries of any items ordered (including any portion of an order) if any payment due to Seller from Buyer shall not be paid in full when due. If Seller shall invoke the foregoing right, the full purchase price for all items completed, whether or not shipped, shall become due and payable, and buyer shall pay to Seller a reasonable charge for any goods and work in process.
- **TERMINATION.** After acceptance or acknowledgement by Seller of any order, such order may not be terminated nor may any part of such order be terminated (unless due to Seller's default) by Buyer without the written consent of Seller signed by a duly-authorized officer of Seller. If Buyer terminates any order or any part of any order, as permitted hereunder, Buyer shall pay to Seller the purchase prices for all items completed, whether or not shipped, and Buyer shall pay to Seller a reasonable charge for any goods and work in process.
- **APPLICABLE LAW.** New York Law applicable to agreements executed and to be performed in the State of New York shall govern all matters relating to sales by Seller to Buyer, including the validity and interpretation of these terms and conditions of sale.
- **ASSIGNMENT.** No assignment of any order by Buyer shall be valid without Seller's prior written consent.
- **AMENDMENTS.** No provision in any order or any other writing (except a writing signed by a duly authorized officer of Seller) shall in any way increase Seller's obligations or decrease Seller's rights in connection with any sale by Seller to Buyer.
- **CONFLICTS.** These terms and conditions shall supersede any conflicting terms and conditions contained in any purchase order or similar document from Buyer to Seller unless Seller accepts such other terms in writing.
- **INDEMNIFICATION.** The Buyer hereby agrees to indemnify and save harmless the Seller, the Seller's representatives, agents and employees, from and against all liability claims and demands on account of injury to persons including death resulting therefrom and damage to property arising out of the performance of this contract by the Buyer, employees, and agents of the Buyer and Buyer's property, except from and against such claims and demands which may arise out of the sole negligence of the Seller or its agents or any subsidiaries. The Buyer shall, at his or its own expense, defend any and all actions at law brought against the Seller, or his agents, based thereon and shall pay all attorney fees and all other expense and promptly discharge any judgment arising therefrom. These conditions shall also apply to any of the Buyer's subcontracted operations.